

**Savannah River Site
Citizens Advisory Board**

**Recommendation # 284
Need to Continue Ongoing Progress for Closure of Tanks 18 and 19**

Background

Savannah River Site (SRS) has been involved in an intensive program for the closure of the High Level Waste (HLW) Tanks at the Site beginning in the 1990s. Early on the regulatory criteria for cleaning and closure of the waste tanks were governed internally by the Department of Energy (DOE), and externally by the US Environmental Protection Agency (EPA) and South Carolina Department of Health and Environmental Control (SCDHEC). However, in 2005 the Site was granted legislative authority to close the tanks by the National Defense Authorization Act (specifically Section 3116) provided certain provisions were addressed. These provisions included such requirements as cleaning the tanks to the maximum extent practical and disposition of wastes in accordance with certain performance objectives designed to protect the public and the Site workers. Also included in the legislation was the requirement that DOE consult with the Nuclear Regulatory Commission (NRC) relative to tank closure.

To date, two of the Site's 51 HLW tanks have been closed (Tanks 17 and 20) and several other tanks are in an advanced state of preparation for closure. The next two HLW tanks planned for closure are Tanks 18 and 19. Progress has been slower than the SRS Citizens Advisory Board (CAB) would like. For example, one earlier SRS System Plan (Life Cycle Liquid Waste Disposition System Plan Rev. 14.1 dated October 2007) had closure of Tanks 18 and 19 in FY 2007. The present System Plan Revision 16 shows closure of Tanks 18 and 19 in FY 2012. We have been advised that some of this delay results from the inclusion of additional modeling techniques proposed by the NRC. In November 2011, the CAB was advised that the NRC concurred fully with the closure measures for Tank 19 but still had some questions regarding tank inventory of radioactive materials and modeling for Tank 18. Hence, the NRC has recommended delaying closure for Tank 18.

At any rate, FY 2012 is well advanced (FY 2012 began on October 1, 2011) and DOE and SCDHEC are undergoing an extensive final review, public input, and approval process with the goal of having a decision on the adequacy of closure measures early in calendar year 2012 (January/February timeframe).

Comments

Clearly the CAB is not in a position to make a technical judgment on the adequacy of measures taken to meet the tank closure criteria, but DOE and its Contractor, Savannah River Remediation, make a very convincing case that measures taken to date are adequate and proper. Further, there have been many technical measures taken from FY 2007 to FY 2011 to remove as much of the radioactive waste material from the tanks as practical. In addition, the NRC is not prepared to disagree with actions taken to date with a strong technical basis; rather they are resorting to a "neutral" position pending further studies and analyses.

One of the models the CAB questions is the annual exposure that an individual would receive (less than 10 mrem¹ of annual exposure) 100 meters from the Tank Farm 10,000 years from now.

¹ DOE standard M 435.1-1 is 25 mrem per year.

This seems unreasonably constraining since the average individual exposure in the US is approximately 620 mrem² per year from natural causes and medical procedures. We also note that 10,000 years as a planning basis seems unrealistic.

We also note that cleaning of these tanks has been ongoing for several years and has been scrutinized closely by DOE, the NRC, EPA, SCDHEC, the Defense Nuclear Facilities Safety Board, SC Governor's Nuclear Advisory Council, and the National Academy of Sciences. This level of overview seems to be adequate and acceptable.

In view of likely budget cuts, and the extent of effort to date, it seems prudent to the CAB that the present schedule be maintained for FY 2012. It has long been a concern of the CAB that tank cleaning would always be subject to ever increasing scrutiny which leads to delays.

All parties involved in tank cleanup need to keep in mind that decisions resulting in delays are preventing progress on the large volume of wastes in the remaining 47 tanks. Potential future funding constraints will make these delays more critical.

The SRS CAB Waste Management Committee has sent a letter to SCDHEC stating the committee's support of the below recommendations.

Recommendations:

The Savannah River Site Citizens Advisory Board recommends that DOE:

1. Take extraordinary measures to meet or exceed the schedule for closure of Tanks 18 and 19 consistent with the FY 2012 closure schedule and not delay closure unless significant safety issues are raised.
2. Continue to provide updates, in conjunction with related review organizations, to the public on closure progress for these tanks and all the remaining tanks scheduled for closure.
3. Develop a review of the lessons learned from this closure action and note improvements to accelerate future closures.

² Nuclear Regulatory Commission, 2011